

Claims

1. In a combination including a chopping drum equipped with a plurality of chopping knives arranged about its periphery and rotatable to move said knives so as to trace a path located adjacent a shearbar, with said shearbar being mounted for movement toward and away from a path traced by said knives, a vibration sensor located for detecting mechanical vibrations generated in said shearbar by said chopping knives and producing a signal relating to a strength of said vibration, and an electronic evaluation device connected to said vibration sensor, the improvement comprising: said evaluation device including a frequency analysis circuit for analyzing said signal provided by said vibration sensor, and to derive information on the distance between said shearbar and said chopping knives from said analysis.

2. The combination, as defined in claim 1, wherein said vibration sensor is designed to detect the acceleration of said shearbar.

3. The combination, as defined in claim 1, wherein said evaluation device is operable to derive sharpness information, relating to said chipping knives, on the basis of said frequency analysis of said signal provided by said vibration sensor.

4. The combination, as defined in claim 1, wherein an operator signal device is coupled to said evaluation device; and said evaluation device operating to perform at least one function of: a) sending a signal, containing information relating to the distance between said shearbar and said chopping knives, to an operator, and, b) automatically triggering an adjustment of said shear bar relative to said chopping knives.

5. The combination, as defined in claim 3, wherein an operator signal device is coupled to said evaluation device; and said evaluation device operating to perform at least one function of: a) sending a signal, containing information relating to sharpness of said knives, to an operator, and b) automatically triggering an adjustment of said shearbar.

6. The combination, as defined in claim 4, where in a crop parameter signal is supplied to said evaluation device; and said evaluation device taking into account said crop parameter signal in performing said at least one function.

7. The combination, as defined in claim 5, wherein a crop parameter signal is supplied to said evaluation device; and said evaluation device taking into account said crop parameter signal in performing said at least one function.

8. The combination, as defined in claim 1, wherein said evaluation device includes an information storage memory in which is stored reference data related to a desired spacing distance between the shearbar and the chopping knives; and said frequency analysis circuit being operable to subject said signals of said vibration sensor to a Fourier transform and to compare the transformed signals with said reference data contained in said memory.